DOCUMENT RESUME

ED 287 277 EC 200 585

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TITLE On Thinking Straight about Finding Straight Thinkers.
INSTITUTION Duke Univ., Durham, N.C.
PUB DATE Feb 85
NOTE 12p.; For related document, see EC 200 584.
PUB TYPE Viewpoints (120)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Ability; Academically Gifted; Admission Criteria; *Aptitude Tests; Demonstration Programs; Elitism; *Gifted; Higher Education; Program Content; Program Design; Secondary Education; *Selective Admission; Student Placement; *Talent; Talent Development; *Talent Identification
IDENTIFIERS North Carolina

ABSTRACT

The essay defends the purposes, selection procedures, programs, and philosophy of the Duke University (North Carolina) Talent Identification Program (TIP), which offers systematic identification of and programming for verbally and mathematically precocious students. The Duke University effort was undertaken to fill a need unmet at federal and state levels, as well as to contribute to psychological and educational research. TIP's use of Scholastic Aptitude Test (SAT) scores as admission criteria is seen as more reliable and democratic than less objective procedures. Examples of ineffectual admission criteria and course offerings of dubious quality and content are cited to underscore TIP's preference for academically rigorous courses based on the liberal arts tradition and emphasizing high-level, fast-paced instruction. Finally, the issue of elitism is addressed, including the need for educators to understand the difference between equal opportunity and equal potential, as well as the responsibility of a democratic society to nurture its gifted citizens. (JW)

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On Thinking Straight

About Finding Straight Thinkers

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Duke University

How to Think Straight Series
February 1985

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EC 200585

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Great universities have as part of their mission the betterment of society, but rarely do they have occasion to accomplish that mission in a broad and expansive way. The Duke University Talent Identification Program is one example of such an expansive undertaking. In May 1980, Duke University made the decision to engage in a systematic search for verbally and mathematically precocious young students. Since then, more than 114,000 qualified students have registered with the Program. In the Program, Duke University helps the future of our nation, which will increasingly depend upon our ability to develop fully our best intellectual resources. However, questions have been raised regarding the reason Duke University has chosen to undertake the task, the test (Scholastic Aptitude Test) and procedures used to identify the brilliant youth, the educational programs developed to assist with the education of the youngsters, and the sense of elitism which some think surrounds the whole undertaking.

WHY SHOULD DUKE IDENTIFY STRAIGHT THINKING YOUTHS?

Currently, the federal government has no programs or apparent interest in our most brilliant youths. The unstated policy seems to be "let them fend for themselves." There is hope that legislation (HB 5596) will be forthcoming to change the federal posture regarding the gifted. In 1976-77, $54.4 million were allocated by 14 states for programs for the gifted. Five years later, all 50 states were spending only $161.4 million, with nearly 55 percent of these funds expended in just four states. Without state and federal assistance, many schools have neither the staff nor budget to provide the education for our most able students. Elementary and secondary schools in the United States are not providing the challenge for many of these students. While the Duke effort was not founded to fill this federal void or assume the elementary and secondary schools' responsibility, it has served to call the attention of our state and federal leadership to the unsatisfied needs of academically talented youths.

Another reason for Duke University to undertake the identification and education of precocious students is the contribution the Program can make to psychological and educational research. A part of providing a national focus on the academically talented and a substantial quality education for all students is

to develop a distinguished research effort upon which decisions of public policy can be based. Very little quality research focusing on the gifted adolescent has been reported in the literature. The staff of the Talent Identification Program, with the assistance of a national advisory committee and a consultative group of faculty colleagues, can make a significant contribution to the research literature in the years to come.

WHY USE THE SCHOLASTIC APTITUDE TEST?

The use of the Scholastic Aptitude Test (SAT) to identify the brilliant youngsters is occasionally called into question. Why would anyone use a test for 12- and 13-year olds which was designed for an older population? Wouldn't such a difficult test create a great deal of anxiety among those youngsters who take it? Don't the tests discriminate against underrepresented racial and ethnic minority students?

The students served by the Duke Program are among the brightest this nation has to offer. Most have been evaluated with tests designed for the average students at their age level. The vast majority of the tests typically used do not have sufficiently difficult test items—or ceiling—to evaluate adequately these straight and brilliant thinkers. Although the SAT was designed for an older population, years of experience show it to be a valid measure of intellectual precocity in younger students. There is reason to investigate whether the test is a better measure of aptitude for these young students than it is for the older students for whom it was designed.

There are no procedures which could effectively select students without error, for any program. While some critics suggest it is wrong to use the SAT, they have few suggestions of what to use in its place. My colleague, Professor Gregory Kimble, astutely asserts that, regardless of what methods are used and the criteria established, one can never escape the fact that any selection procedure would still divide students into a group which meets the criteria and a group which does not meet the criteria. The trick is to use criteria that admit people who will succeed in the Program and reject those who will not. The errors that occur are the "false positives," who meet the criteria and then fail in the Program, not the "misses," who fall below the criteria but would have succeeded if admitted. The latter group

cannot be identified; the "false positives" can be identified. I suggest it seems more reasonable to use the scores from a test which has resulted from years of research and development and one which immediately creates an image or understanding (i.e., SAT-V = 800; SAT-M = 800) of intellectual level than simply to rely on unreliable subjective judgments. The Talent Identification Program has admitted very few false positives (less than 0.3%). Perhaps we have failed to admit some false negatives. While this is regrettable, it is better to err in that manner than to wait for the "perfect" procedure, for to do so actually translates into doing nothing at all.

The testing anxiety issue is a "straw person." Students' participation in the Duke Talent Identification Program is voluntary, and participants know that the effort is designed for able students who need and desire additional challenges. Although many students have never encountered a difficult test, a large number of them report that they feel *less* anxious taking the SAT in grade seven because it "does not count." When they first take the SAT, the students are not seeking admission to a college or university, but rather are searching for additional information about their own abilities. Some students have reported that taking the SAT as seventh graders gave them *more* confidence to undertake the Preliminary Scholastic Aptitude Test (PSAT) and the SAT in high school, so that, in the end, they were *less* anxious when sitting for these tests when it was most important.

The participation of underrepresented racial and ethnic minority participants in the Duke Talent Identification Program has always been a high priority. The number of racial minority students in our talent search has increased tenfold in four years; minority enrollment in our academically rigorous Summer Program has increased from one in 1981 to fifty-one in 1984. The admission criteria have not been relaxed and the identifier (SAT) has been consistently applied across all students, regardless of race or ethnic background.

I believe more basic to the issue of racial and ethnic minority involvement is that *all* societies have *implicit* searches for talent and that many societies, especially those with large populations and advanced economies, include in their implicit criteria certain factors that have little or nothing to do with intellectual talent. It is perfectly reasonable to say that an academically talented non-minority child

with an above average socio-economic background will be "magically" identified by an implicit talent search. Money and social background open doors for talent. But, does an implicit talent search open the same doors for the equally talented child *without* the advantages of social prestige or economic clout? I think there are too many cases arguing against this assertion for this question to be answered affirmatively. Though critics may claim that basing a talent search on the narrow results of an aptitude or intelligence test does not identify all truly talented children, at least there is a beauty in the simplicity of such a search. It is reasonable to claim that a search based on test scores is more "democratic" and less sensitive to social privilege than any advanced society's implicit talent search.

THE EDUCATIONAL PROGRAMS FOR ACADEMICALLY TALENTED YOUTHS

While efforts to develop the talent of brilliant youths have expanded greatly in the last ten years, it is sad to see the form taken by many of the programs. The nation's brilliant youths must be rescued from the many dubious attempts which are offered under the rubric of programs for the gifted. My friend and colleague Professor William Durden, Director of The Johns Hopkins University Center for Academically Talented Youth, recently delivered an invited address for a lecture series on exemplary programs for the gifted. He had received announcements from many institutions offering educational opportunities for our most capable students and cited the following examples of ineffectual programs. One prominent program lists qualifications as follows:

> Applicants must be in the top 5% of their class in academic performance or in the 95 percentile on a tested area of a standardized test administered in the school. Also, students who have been identified as gifted by their school districts are invited to apply. If a student has a strong recommendation from a teacher as being potentially gifted in one of the above categories, then that student is also welcome to apply. In addition, any interested student is welcome to apply.

This Program offered a course in "bears." The description was as follows:

> Learn about real and imaginary bears, from koalas to Paddington. In addition to studying the habits of bears in the world, activities will include the history of the Teddy Bear.

Yet another course was entitled "Man the Voyager—Grades 8-12":

> The basis of this course will be Homer's *Odyssey*. Traveling with Odysseus, we will find out what it is like to go to war and then try to come home. As war correspondents, we will send home reports. As Greeks and Romans, we will try to arrange a cease fire. In short, we will live the Odyssey for our three weeks together.

As Professor Durden aptly noted, there were obvious errors in the course description. The war was already over, there were no Romans, and the cease fire had already been arranged!

Finally, Durden noted a course description for creative problem solving. The description was as follows:

> This course will use brainstorming, puzzles, games, literature, and decisionmaking to unlock students' creativity and sharpen their decision making and leadership ability. For example, we will consider how many improvements could you make in the bathtub?

These descriptions come from actual classes offered for the gifted. They represent crooked thinking about straight thinkers and are the antithesis of the Duke and Hopkins programs. Now, I am not suggesting that all educational programs for the academically gifted are as frivolous—and inaccurate—as those noted. However, I do argue that our brilliant youngsters have far more opportunities to waste their time and resources in courses of the "touchy-feely" nature designed by the unknowing than they have opportunities to become involved in academically rigorous courses with the liberal arts tradition at their core. It is alarming to observe

that many programs designed for the most talented students are dominated by a philosophy of education in which priority is given to sentimental, "creative" experiences to the exclusion of rigorous content. Would one train a musician by merely exercising the dexterity of the fingers, arms, or lips? It is a naive and outdated philosophy that asserts that creativity taught in isolation will give students a basis for future success in an academically rigorous discipline.

The decision to pursue high-level and fast-paced instruction in the Duke Program was made on the premises that education in the liberal arts tradition was best for the brilliant students and that classroom time should not be the criterion for success. The first Summer Residential Program was held in 1981. From the first, I wanted to create an atmosphere which would encourage the students to think at their own rapid speed about important topics to the end that they can learn independently. I was not interested in having our students reflect on Paddington or build a better bathtub, or in using other methods of encouraging creativity in an intellectual vacuum. Through consultations and informal talks during the 1980-81 academic year, a strategy emerged for a summer program for gifted students which had intellectual integrity and the promise of becoming a national model.

It was evident that the students with extraordinary intellectual abilities did not need the same amount of classroom time to master a given amount of material as those with lesser abilities. Further, it was equally obvious that the brilliant students needed an educational challenge. I realized that curiosity and discovery are important motivational forces. The program's faculty set out to teach concepts which increasingly involved complex thought processes. We were careful to avoid the societal error which suggests that "challenging" is synonymous with "more." Finally, I aspired to leave the students time to be 12-to-16 years old.

The faculty invited to instruct the students are themselves extraordinary. The criteria for their selection were rather simple. The faculty must be masters of their subject matter, themselves brilliant, willing to work long hours, and excited about the challenge provided by precocious students.

The results have been amazing. For example, the students enrolling in pre-calculus mathematics on the average finish 1.5 years of high school mathematics

in three weeks. Many students in expository writing achieve at a level which we all desire for our college freshman. Foreign and classical language students typically finish the equivalent of at least one college semester of a language in three weeks. Moreover, students enrolled in the college credit courses in 1984 at the average age of 14 years obtained a grade point average of 3.50. The students were evaluated with the same level of tests as those used for Duke undergraduates and graded by the same standards. The students in our academic year By-Mail Program have obtained average Advanced Placement (AP) grades of 4.03 (5.0 is the highest). Perhaps these results are the best defense for what we are providing for the brilliant student.

Skeptics argue that the students do not retain materials learned in such rapid fashion. This simply is not the case. Several of the students who have studied with us have enrolled in quality institutions such as The California Institute of Technology, Duke, Harvard, MIT, and Princeton. The quality of their work at these institutions suggests they have mastered the foundation courses taken at Duke. Clearly, longitudinal research must be conducted in order to answer the complex question of whether involvement in the Talent Identification Program makes a significant difference.

THE ISSUE OF ELITISM

Any program or effort which recognizes and encourages extraordinary talent is elite by definition, for not everyone can qualify. Mediocre musicians are not admitted to Juilliard, average athletes are not selected for Olympic teams, and average students are not admitted to the nation's best and, perhaps, most elite universities and graduate and professional schools. Our society does not tell our best athletes not to run relays so fast and/or tell our best musicians not to perform a piece so flawlessly. However, our society does suggest, through intellectually soft educational programs, that our best minds should slow down, not think so fast and at such a high level!

The statutes in many states call for programs consistent with a student's abilities. By definition—and law—some of them must be elitist.

The misreading of the phrase "all men are created equal" by educators exacts

a heavy price. The "leveling" behaviors of educators which follow from such a misconception are inappropriate in a nation such as ours where opportunities abound. These behaviors are the penalty for being less democratic than we claim. "All men are created equal" does not mean that all men are the same. Rather, it suggests that all deserve the same chance and the freedom to develop whatever potential they possess. To me, the problem arises because all men are *not* created with equal potential. We cease to be a democratic nation when we restrict those blessed with gifts from developing them; we cease to be a nation of achievers when we expect *only* the average and the mediocre; we cease to be a creative and dynamic nation when we do not call upon the gifted and the talented to use and develop their gifts for the betterment of their follow citizens.

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A native of Bedford, Iowa, Professor Sawyer received his B.S. degree from the Northwest Missouri State University and his M.Ed. degree from the University of Missouri-Columbia. He was a teacher and counselor in Iowa and Missouri prior to his return to graduate school at the University of Wyoming where he received his Ed.D. degree. Before joining the faculty at Duke University, he served as Professor of Psychology and Associate Dean of Arts and Sciences at the University of Missouri-Rolla.

Professor Sawyer served as Director of Summer Educational Programs at Duke before devoting his full attention to the development of the Precollege and Talent Identification Program. He is a frequent contributor to the research literature and is well known for his work with academically brilliant youths.

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